

Alcohol Can Lead to Increased Risk for Injury

Montana, Fall, 2011

Alcohol use is a serious factor for injuries

Alcohol use puts people at risk for sustaining an injury, from motor vehicle crashes (MVCs), falls, firearm injuries, and violence and suicide. Furthermore, the more alcohol consumed, the greater the risk of injury.^{1,2}

- In the US, 32 people die each day due to MVCs involving alcohol.³
- Montana had the highest alcohol-impaired fatality rate for MVC in the nation in 2008.⁴
- Alcohol is involved in an estimated 37% of all fatal MVCs in the US.⁵
- Among adults aged 18-65 years, 3.7 million non-fatal falls, 3.6 million non-fatal transport collisions (either motorized, bicycle, or pedestrian), and 60,000 non-fatal firearm injuries that involve alcohol occur annually in the US.⁵
- Approximately 2 of 3 incidents of intimate partner violence are associated with alcohol in the US.³

Hazardous and harmful drinking can not only lead to injuries, but other health effects like neurological problems, psychiatric problems, cancer, and liver disease. The Dietary Guidelines for Americans⁶ recommend no more than 2 drinks per day for men not to exceed 14 drinks per week or 4 drinks per occasion; and no more than 1 drink per day for women not to exceed 7 drinks per week or 3 drinks per occasion. Serving sizes of one alcoholic drink are shown in Figure 1.

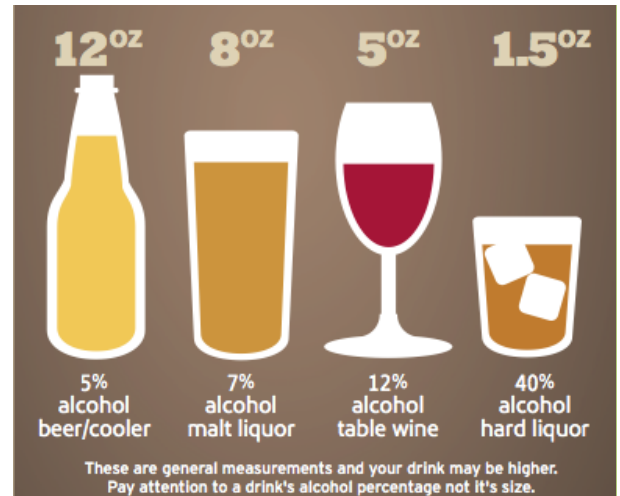
This report uses data collected from the 2008 and 2010 Behavioral Risk Factor Surveillance System survey and the 2009 and 2011 Youth Risk Behavior Survey to examine self-reported alcohol use and health risks among adults and youth in Montana. It also provides information on programs offered by the Montana Injury Prevention Program to reduce alcohol-related injuries.

Self-reported Binge or Heavy Drinking

Fifty-eight percent of adults in Montana reported that they drank alcohol in the last 30 days and 33% of those reported binge or heavy drinking. Binge drinking is defined as having five or more alcoholic drinks for men and four or more for women on one occasion. Heavy drinking is defined as a man who drinks more than 2 alcoholic drinks per day or a woman who drinks more than 1 drink per day.

- People aged 65 and older reported a lower prevalence of heavy drinking than all other ages groups, except those aged 18-24. People aged 65 and older had a lower prevalence of reporting binge drinking than all other age groups (Figure 2)
- Men reported a higher prevalence of binge drinking and heavy drinking than women (Figure 2).
- There were no significant differences in the reported prevalence of binge drinking or heavy drinking among races (Figure 2).

Figure 1. Serving size of one alcoholic drink based on alcohol content

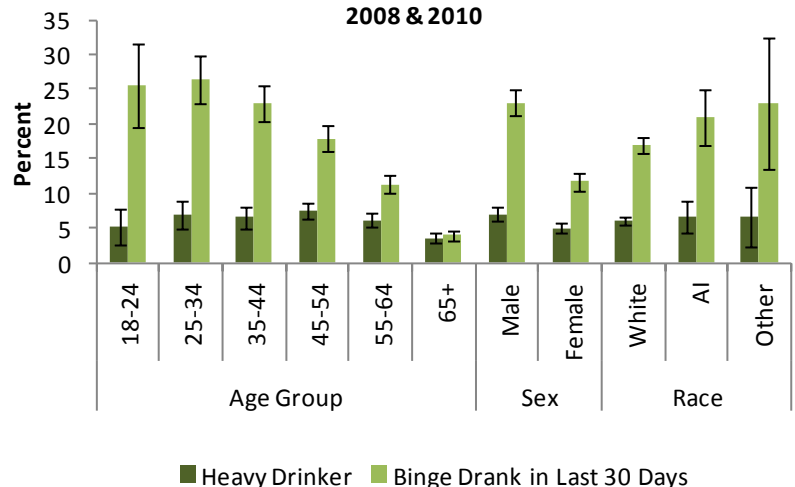


Data source: National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism

17% and 6% of adults in Montana reported binge and heavy drinking in the last 30 days, respectively

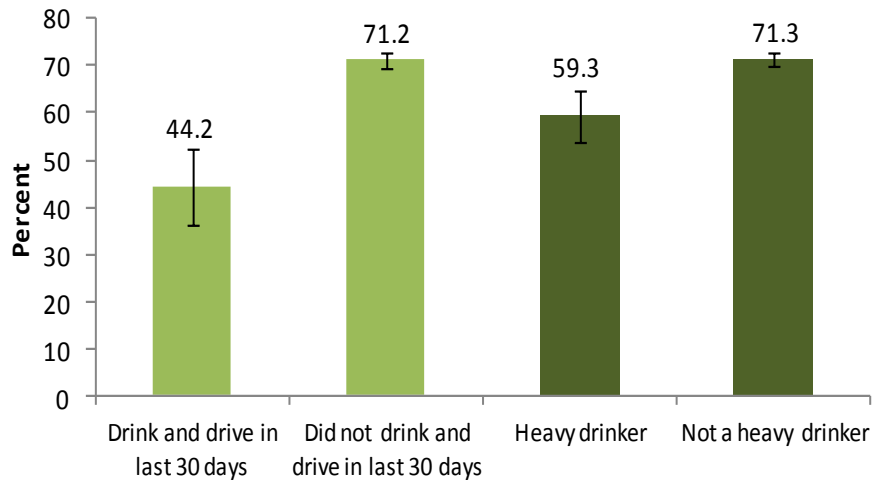
Data source: BRFSS 2008 & 2010

Figure 2. Percent of heavy drinking or binge drinking among adults by selected characteristics, BRFSS, Montana, 2008 & 2010



I=95% Confidence Interval

Figure 3. Percent of adults who report always wearing a seatbelt by drinking status, BRFSS, Montana, 2008 & 2010



Risk factors for MVCs among adults and high school students who drink alcohol

MVCs are the leading cause of injury-related death in Montana. Alcohol and/or drugs were involved in 47% of all fatal MVCs in 2009.⁷ Using a seatbelt is an effective way to protect you in a crash. However, seatbelt use is much lower in crashes that are alcohol related than those that are not.⁷ Although 71.6% (69.8%-73.5%) of adults reported always using their seatbelts in Montana (BRFSS, 2010, data not shown), 3/4 of all MVC fatalities that involved alcohol were unrestrained.⁷

- A lower percent of adults who drank and drove in the last 30 days reported always wearing a seatbelt than those who did not drink and drive. Adults who reported being heavy drinkers reported always wearing a seatbelt less often than those who did not report heavy drinking (Figure 3).
- High school students who reported drinking alcohol and driving in the last 30 days reported always using a seatbelt less frequently than those who did not drink alcohol and drive. High school students who reported riding with a driver who had been drinking alcohol also reported always wearing a seatbelt less frequently than those who did not report having ridden with a driver who had been drinking alcohol (Figure 4).

Figure 4. Percent of high school students who report always using their seatbelt by alcohol use, YRBS, Montana, 2009 & 2011



I = 95% Confidence Interval

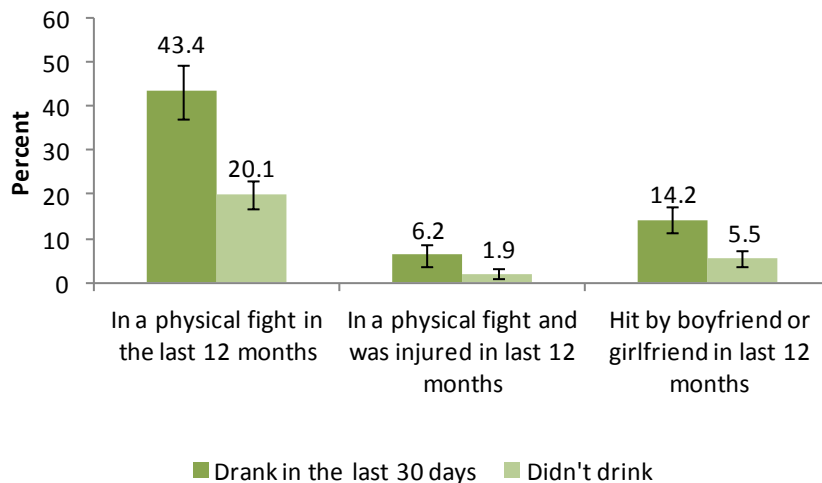
Alcohol and intentional injury among high school students

Use of alcohol among youth can lead to higher risk factors for being involved in violence.⁸ In Montana, 45% of high school students who reported drinking alcohol in the last 30 days said they were also in a physical fight compared to only 20% who did not drink (Figure 5). Being injured in a fight and being hit by a boyfriend or girlfriend was also more frequent among high school students who reported drinking alcohol in the last 30 days.

Alcohol use is often associated with suicide and attempted suicide. In the US in 2005-2006 (most recent year for which data are available), nearly 24% of suicide decedents tested for alcohol had a blood alcohol concentration above the legal limit.⁹

Of Montana high school students who reported drinking in the last 30 days, a higher percent reported considering suicide or attempting suicide than students who did not drink in the last 30 days (Figure 6). There was no difference in reporting making a plan to commit suicide or being injured due to a suicide attempt by drinking status.

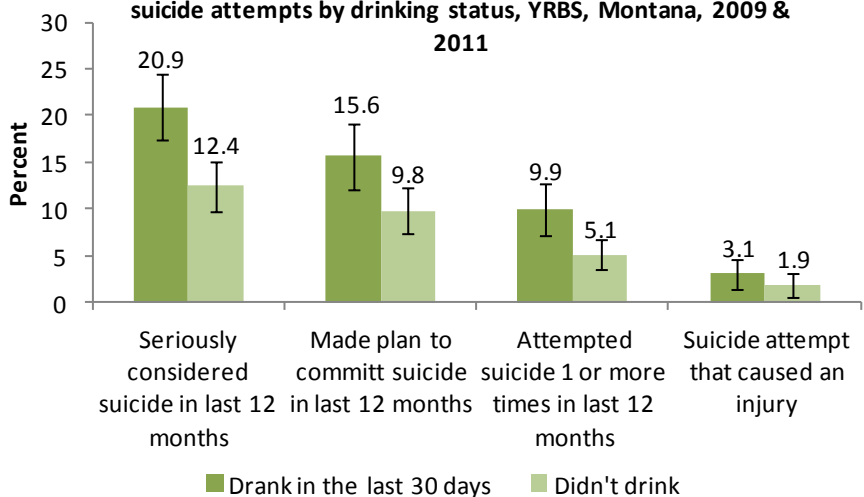
Figure 5. Percent of high school students who self-report violence by drinking status, YRBS, Montana, 2009 & 2011



One in four high school students reported having their first drink of alcohol at age

13 or 14
Data source:
YRBS, 2011

Figure 6. Percent of high school students who self-report suicide attempts by drinking status, YRBS, Montana, 2009 & 2011



I = 95% Confidence Interval

Conclusions and Recommendations

Excessive alcohol use is a contributing factor for many injuries. Deaths represent only a small proportion of those injuries. There are other hospitalizations, emergency department visits, and office visits related to alcohol use, although in many the alcohol use goes unrecorded. As a result, the true burden of alcohol-related injuries is underestimated. Therefore, it is difficult to fully describe the burden of alcohol use and injury in Montana.

The Montana Injury Prevention Program offers resources to assist medical providers to assess alcohol use with their patients, especially in the emergency department. Screening, Brief Intervention and Refer to Treatment (SBIRT) is an evidence-based program that uses motivational interviewing to encourage people to address their drinking behaviors. This program is being implemented in 13 hospitals around the state. When a patient is seen by a health care provider, the patient is asked about their alcohol use. If he or she is at risk, they are given a brief intervention and are provided additional information about support services in the community.

Screening
Brief
Intervention
Referral
Treatment

In **75%** of fatal MVCs that involved alcohol in Montana, a **seatbelt was not used**⁷

For more information on SBIRT or injuries and alcohol in Montana, see our website at www.dphhs.mt.gov/ems/prevention/prevention_menu.html or contact the Montana Injury Prevention program at: bperkins@mt.gov, 406-444-4126. Additional programs to address youth substance abuse and resources are available at the Montana Department of Public Health and Human Services Prevention Resource Center. For more information see the website at prevention.mt.gov or www.parentpower.mt.gov or call 406-444-3484.

Methods and Limitations

For information on the methods and limitations of the Behavioral Risk Factor Surveillance System survey (BRFSS) and the Youth Risk Behavior Survey (YRBS) see: <http://www.cdc.gov/brfss/> and <https://www.cdc.gov/yrbs/>, respectively.

References:

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